Claims

Sub a1

1. A method for influencing the torque on at least one driving wheel of an industrial truck for the purpose of driving and/or braking it wherein the torque of a driving motor (30) for the industrial truck is reduced by means of a slip regulator (46) at an appropriate amount depending on the slip by determining the slip between the driving wheel (14) and the floor by making a comparison of the circumferential speed measured or calculated for the driving wheel (14) and the vehicle travelling speed measured for the industrial truck, and comparing it to a setpoint.

2. The method according to claim 1, characterized in that the driving motor (30) is an electric motor or hydraulic engine.

3. The method according to claim 2, characterized in that a three-phase a.c. motor is provided.

4. The method according to claim 1, characterized in that the intervention of the slip regulator (46) takes place behind an rpm governor (24) which has a desired torque as an output and the output of which, after undergoing correction by the slip regulator, is fed to a secondary order torque regulation circuit.

5. The method according to claim 2, characterized in that the intervention of the slip regulator (46) takes place behind an rpm governor (24) which has a desired torque as an output and the output of which, after undergoing correction by the slip regulator, is fed to a secondary order torque regulation circuit.

6. The method according to claim 3, characterized in that the intervention of the slip regulator (46) takes place behind an rpm governor (24) which has a desired torque as an output and the output of which, after undergoing correction by the slip regulator, is fed to a secondary order torque regulation circuit.

7. The method according to claim 1, characterized in that the vehicle travelling speed is determined from the number of revolutions of at least one non-driven wheel (10, 12) of the industrial truck.

8. The method according to claim 2, characterized in that the vehicle travelling speed is determined from the number of revolutions of at least one non-driven wheel (10, 12) of the industrial truck.

9. The method according to claim 3, characterized in that the vehicle travelling speed is determined from the number of revolutions of at least one non-driven wheel (10, 12) of the industrial truck.

10. The method according to claim 4, characterized in that the vehicle travelling speed is determined from the number of revolutions of at least one non-driven wheel (10, 12) of the industrial truck.

11. The method according to claim 1, characterized in that the speed is measured on two non-driven wheels (10, 12) in order to determine the reference speed on the driving wheel (14) as a vector quantity (direction and magnitude) from the vehicle geometry.

12. The method according to claim 2, characterized in that the speed is measured on two non-driven wheels (10, 12) in order to determine the reference speed on the driving wheel (14) as a vector quantity (direction and magnitude) from the vehicle geometry.

13. The method according to claim 3, characterized in that the speed is measured on two non-driven wheels (10, 12) in order to determine the reference speed on the driving wheel (14) as a vector quantity (direction and magnitude) from the vehicle geometry.

14. The method according to claim 4, characterized in that the speed is measured on two non-driven wheels (10, 12) in order to determine the reference speed on the driving wheel (14) as a vector quantity (direction and magnitude) from the vehicle geometry.

15. The method according to claim 5, characterized in that the speed is measured on two non-driven wheels (10, 12) in order to determine the reference speed on the driving wheel (14) as a vector quantity (direction and magnitude) from the vehicle geometry.

16. The method according to claim 11, characterized in that a calculation of the circumferential component and/or the axial component of the reference speed is performed by measuring the steering angle on the steered driving wheel (14).

17. The method according to claim 1, characterized in that the desired slip for a certain friction pairing is constituted by an optimum slip value.

18. The method according to claim 2, characterized in that the desired slip for a certain friction pairing is constituted by an optimum slip value.

19. The method according to claim 3, characterized in that the desired slip for a certain friction pairing is constituted by an optimum slip value.

20. The method according to claim 4, characterized in that the desired slip for a certain friction pairing is constituted by an optimum slip value.

21. The method according to claim 5, characterized in that the desired slip for a certain friction pairing is constituted by an optimum slip value.

22. The method according to claim 6, characterized in that the desired slip for a certain friction pairing is constituted by an optimum slip value.

23. The method according to claim 7, characterized in that the desired slip for a certain friction pairing is constituted by an optimum slip value.

24. The method according to claim 17, characterized in that the desired slip is determined while the industrial truck is in operation.

25. The method according to claim 11, characterized in that the axial speed component is determined from the reference speed of the steered driving wheel (14) and the steering angle is limited or reduced if the axial speed component exceeds a preset point.

26. The method according to claim 16, characterized in that the axial speed component is determined from the reference speed of the steered driving wheel (14) and the steering angle is limited or reduced if the axial speed component exceeds a preset point.